

## CLAIMS

What is claimed is:

- 1 1. An image display apparatus for displaying multi-slice images corresponding to  
2 cross-sections of a subject in multiple display areas on a single display screen, the  
3 apparatus comprising:  
4 means for deforming a display format of each display area; and  
5 means for changing the display format of one of the display areas to change a  
6 relationship between the image in the one display area with an image in a display area  
7 adjacent to the one display area.
- 1 2. The image display apparatus of claim 1 further comprising means for overlapping  
2 adjacent display areas on the single display screen.
- 1 3. The image display apparatus of claim 2 further comprising means for assigning a  
2 different opacity to each display area.
- 1 4. The image display apparatus of claim 1 further comprising:  
2 means for assigning a different opacity to each display area; and  
3 means for arranging each display area with a different opacity on a three-  
4 dimensional image reconstructed with previously acquired data.
- 1 5. A method for displaying multi-slice images corresponding to cross-sections of a  
2 subject in multiple display areas on a single display screen, the apparatus comprising:  
3 deforming a display format of each display area; and

4 changing the display format of one of the display areas to change a relationship  
5 between the image in the one display area with an image in a display area adjacent to the  
6 one display area.

1 6. The method of claim 5 further comprising overlapping adjacent display areas on  
2 the single display screen.

1 7. The method of claim 6 further comprising assigning a different opacity to each  
2 display area.

1 8. The method of claim 5 further comprising:  
2 assigning a different opacity to each display area; and  
3 arranging each display area with a different opacity on a three-dimensional image  
4 reconstructed with previously acquired data.

1 9. A computer-readable medium having executable instructions for performing a  
2 method comprising:  
3 deforming a display format of each of a plurality of display areas for displaying on  
4 a single screen, each display area displaying a multi-slice image corresponding to a cross-  
5 section of a subject; and  
6 changing the display format of one of the display areas to change a relationship  
7 between the image in the one display area with an image in a display area adjacent to the  
8 one display area.

- 1 10. The computer-readable medium of claim 9 having further executable instructions  
2 comprising overlapping adjacent display areas on the single display screen.
- 1 11. The computer-readable medium of claim 10 having further executable instructions  
2 comprising assigning a different opacity to each display area.
- 1 12. The computer-readable medium of claim 9 having further executable instructions  
2 comprising:  
3 assigning a different opacity to each display area; and  
4 arranging each display area with a different opacity on a three-dimensional image  
5 reconstructed with previously acquired data.
- 1 13. A computer system comprising:  
2 a processor;  
3 a memory coupled to the processor through a bus; and  
4 a display process executed from the memory to cause the processor to deform a  
5 display format of each of a plurality of display areas and to change the display format of  
6 one of the display areas each display area, wherein the plurality of display areas are  
7 operable for displaying on a single display screen with each display area displaying a  
8 multi-slice image corresponding to a cross-section of a subject.
- 1 14. The computer system of claim 13, wherein the display process further causes the  
2 processor to overlap adjacent display areas for displaying on the single display screen.

1 15. The computer system of claim 14, wherein the display process further causes the  
2 processor to assign a different opacity to each display area.

1 16. The computer system of claim 13, wherein the display process further causes the  
2 processor to assign a different opacity to each display area and to arrange each display  
3 area with a different opacity on a three-dimensional image reconstructed with previously  
4 acquired data.

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